

RARÆ AVES OF THE INSECT FAUNA OF ARIZONA.

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(Continued from p. 59, vol. ix.)

Nymphalidæ furnished a few fine species. Of *D. archippus*, var. *fumosus*, several were secured. *D. berenice*, var. *strigosa*, is not uncommon. *Agraulis vanillæ* I saw in isolated examples. *Argynnis nausicaa* is the only species seen, and took it in Yavapai County, upper Hassayampa, in several localities on flowers of *Monarda fistulosa*. *Melitæa minuta* found in small numbers on flowers of a species of Aster and Mountain Mint, in Coconino County, some on highest peaks of 12,860 feet altitude, in alpine zone. *Grapta zephyrus*, took two examples in central and northern Arizona. *Synchlæ lacinina*, saw only two or three. *Limenitis hulstii* with its mesial white spotted line of secondaries, flew in company with *D. berenice* in S. Arizona. *Limenitis ursula*, var. *arizonensis*, devoid of fulvous spots on upper surface, flew sparingly in canyons of central Arizona, sometimes in company with *Heterochroa californica*. It always had a weather eye on its pursuer and usually flew high. *Lim. eros*, var. *obsoleta*, should be stricken from the check list; Mr. Wm. H. Edwards does not recognize it any more. A want of sufficient and good material to describe from caused him to give two names to the same lepidopter, and he informed the writer that the name *hulstii* must stand for it. Took very few *Apatura leilia* on flowers of *Prosopis juliflora* or mesquite, in Pima County, and saw less here in Mariposa County, sipping on willows. *Lemonias palmerii* feeds on flowers of mesquite in S. Arizona. *Lem. nais*, in Yavapai County, is found on flowers of *Ceanothus fendleri* near watered mountain localities. *Lycænas* occur in valleys, and more so on mountains, always more abundant near a streamlet. *Thecla* in similar localities; *T. halesus* sparingly on desert buttes. *Pieris beckeri*, took a few poor examples of it on Mt. Humphrey, some near snow fields, others on the peak, from 11,500 to 12,860 feet altitude. *Anthocharis pima* on high altitudes of Pima and Maricopa Counties. Have also met isolated specimens flying across desert. It is hard work climbing peaks for such beauties. Of *Terias gundlachia*, came across two examples late in November or early in December this season, when I went without

net to the desert for Coleoptera. Believe it was the first time the net was not at hand.

Of other Papilionidæ noticed a few *Catopsilia* spec. of a lemon-yellow, like *eubule*, but without markings on reverse side. It had one ocellus, or rather discal spot on secondaries; devoid of any other color or marking. I failed at first to secure any, taking it for *eubule*, and after securing a couple failed to see more. It could not have been *agarithe*; saw only two *Meganostoma cæsonia*. *Papilio daunus* occurred on mountains of central and northern Arizona, flying high in the canyons. *Papilio asteroides*, I took two or three in S. Arizona on high peaks, although I saw one flying in the vicinity of Phoenix this Autumn within town limit. Noticed a single specimen of *Papilio bairdii* feeding on flowers of Wild Bergamot near Flagstaff, but could not capture the prize. In Yavapai County took two examples of the large, whitish *Pyrgus ericetorum* on flowers of *Alfalfa*. A few other Hesperidæ fell to my lot, which are at best local and rare: *Nisoniades afranius*, *Pholisora ceos*, *Nis. pacuvius*, one *Erycides* spec., and a number still undetermined. For naming I am under obligations to Messrs. Wm. H. Edwards, D. Bruce and Dr. H. Skinner.

Little time left to mention many of the rarer Coleoptera, the bulk of which it will take years to fully determine, as my first year's collecting has taught me. In Yavapai County I secured that rare green-bronzed *Plusiotis lecontei* mostly in pine woods. Likewise the formidable looking *Dynastes grantii*, a hercules of Arizona, seeking mountain canyons for its habitat. In the pines of same localities of central Arizona occur the large Longicorn beetle, *Ergates spicula*. While here in S. Arizona we find *Dentrobachus geminatus*, which seems to affect old stumps of Cottonwood, and also taken at light. On sap of Willows one finds here the blue and white Elaterid, *Chalcolepidius webbiai*, and in the soft rotted tissue of the giant of our desert, *Cereus giganteus* that rare, black *Hololepta cactii*. Tenebrionidæ are found in many species here, so are Meloidæ, Melolonthidæ, Carabidæ, Staphylinidæ, Cerambycidæ, Curculionidæ, and many other families. All of my Coleoptera are in the hands of Mr. Charles Palm, of New York. After one is affected with the collecting fever of Arizona, it is well-nigh impossible to give it up. As Pat would say: It is a "taking disease."